

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
26 May 2005 (26.05.2005)

PCT

(10) International Publication Number
WO 2005/047346 A1

(51) International Patent Classification⁷: **C08F 8/14**,
20/18, G03F 7/00

K.K., 5-1, Ogimachi, Kawasaki-ku, Kawasaki-shi, Kana-
gawa 2100867 (JP).

(21) International Application Number:
PCT/JP2004/016505

(74) Agents: AOKI, Atsushi et al.; A. AOKI, ISHIDA & AS-
SOCIATES, Toranomom 37 Mori Bldg., 5-1, Toranomom
3-chome, Minato-ku, Tokyo 1058423 (JP).

(22) International Filing Date:
1 November 2004 (01.11.2004)

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG,
KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,
MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003-382759 12 November 2003 (12.11.2003) JP
60/523,309 20 November 2003 (20.11.2003) US

(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): SHOWA
DENKO K.K. [JP/JP]; 13-9, Shibadaimon 1-chome, Mi-
nato-ku, Tokyo 1058518 (JP).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): KAMIJO, Masanao
[JP/JP]; c/o Corporate R & D Center (Kawasaki), SHOWA
DENKO K.K., 5-1, Ogimachi, Kawasaki-ku, Kawasaki-
shi, Kanagawa 2100867 (JP). ONISHI, Mina [JP/JP]; c/o
Corporate R & D Center (Kawasaki), SHOWA DENKO
K.K., 5-1, Ogimachi, Kawasaki-ku, Kawasaki-shi, Kana-
gawa 2100867 (JP). MUROFUSHI, Katsumi [JP/JP]; c/o
Corporate R & D Center (Kawasaki), SHOWA DENKO

Published:

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: CURABLE POLYMER COMPOUND

(57) Abstract: There are provided a novel curable polymer compound of the present invention comprises having a structure repre-
sented by the following Formula (I): $\text{CH}_2=\text{C}(\text{R}^1)\text{COO}(\text{R}^2)_n\text{CH}_2\text{CH}(\text{OH})\text{CH}_2\text{OOC}-$ wherein R^1 represents a hydrogen atom
or a methyl group, R^2 independently has one or more organic residues selected from the group consisting of an alkylene group, a
branched alkylene group, an alkenylene group, a branched alkenylene group, a cycloalkylene group, a cycloalkenylene group and an
arylene group, and n represents an integer of 0 to 1, a method of preparing the polymer compound, a radical polymerizable and cur-
able composition using the polymer compound, and a cured product obtained by photo-curing the radical polymerizable and curable
composition.